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Philips Intellectual Property & Standards
595 Miner Road
Cleveland, OH 44143

EXAMINER

HO, ALLEN C

ART UNIT	PAPER NUMBER
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2882

MAIL DATE	DELIVERY MODE
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11/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,159

Applicant(s)

SCHLOMKA ET AL.

Examiner

Allen C. Ho

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D.*11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters **13** (Figs. 1 and 2) and **15** (page 8, lines 22 and 31; Fig. 7) have both been used to designate examination zone.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character **17** has been used to designate both measuring surface (Fig. 1) and circular trajectory (page 7, line 2; Fig. 5).
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the line from a detector element to the radiation source as claimed in claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim 1 is objected to because of the following informalities:

Line 13, "reconstruction" should be deleted.

Appropriate correction is required.

5. Claim 2 is objected to because of the following informalities:

Line 2, "reconstruction" should be replaced by --reconstructing--.

Appropriate correction is required.

6. Claim 3 is objected to because of the following informalities:

(1) Line 2, "reconstruction" should be replaced by --reconstructing--.

(2) Line 4, "the" before "scatter center" should be replaced by --a--.

Appropriate correction is required.

7. Claim 4 is objected to because of the following informalities:

Line 2, "reconstruction" should be replaced by --reconstructing--.

Appropriate correction is required.

8. Claim 5 is objected to because of the following informalities:

(1) Line 2, "reconstruction" should be replaced by --reconstructing--.

- (2) Claim 5 recites the limitation "the radiation source position" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

9. Claim 6 is objected to because of the following informalities:

- (1) Claim 6 recites the limitation "the measuring values" in line 13. There is insufficient antecedent basis for this limitation in the claim.

- (2) Line 15, "a" before "radiation source" should be replaced by --the--.

Appropriate correction is required.

10. Claim 7 is objected to because of the following informalities:

- (1) Line 5, "a" before "radiation source" should be replaced by --the--.

- (2) Line 5, "a" before "diaphragm arrangement" should be replaced by --the--.

- (3) Line 12, "a" before "detector unit" should be replaced by --the--.

Appropriate correction is required.

11. Claim 8 is objected to because of the following informalities:

Line 3, "the" before "scatter center" should be replaced by --a--.

Appropriate correction is required.

12. Claim 12 is objected to because of the following informalities:

Line 12, "reconstruction" should be deleted.

Appropriate correction is required.

13. Claim 14 is objected to because of the following informalities:

Claim 14 should depend on claim 13.

Appropriate correction is required.

14. Claim 15 is objected to because of the following informalities:

Line 3, "the" before "scatter center" should be replaced by --a--.

Appropriate correction is required.

15. Claim 16 is objected to because of the following informalities:

Line 2, "scatter" should be replaced by --scattered--.

Appropriate correction is required.

16. Claim 17 is objected to because of the following informalities:

Line 2, "inverse" should be deleted.

Appropriate correction is required.

17. Claim 19 is objected to because of the following informalities:

Line 2, "scatter" should be replaced by -scattered radiation--.

Appropriate correction is required.

18. Claim 20 is objected to because of the following informalities:

Line 3, "the" before "scatter center" should be replaced by --a--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112.

19. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

20. Claims 1-5 and 9-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites "generating relative motions, comprising a rotation about an axis of rotation, between the radiation source and the object". The specification does not describe a radiation source and an object rotating about an axis of rotation. Rather, the specification describes a radiation source rotating about an object.

21. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

22. Claims 1-5, 8-15, and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "generating relative motions, comprising a rotation about an axis of rotation, between the radiation source and the object". This limitation is indefinite since it fails to identify what rotates about the axis of rotation.

Claim 1 recites the limitation "the rotational plane" in d). There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the scatter angle" in line 6. There is insufficient antecedent basis for this limitation in the claim. Furthermore, the scatter angle is not defined.

Claim 8 recites the limitation "the scatter angle" in line 6. There is insufficient antecedent basis for this limitation in the claim. Furthermore, the scatter angle is not defined.

Claim 10 recites the limitation "the scatter angle" in line 2. There is insufficient antecedent basis for this limitation in the claim. Furthermore, the scatter angle is not defined.

Claim 10 recites "the wave vector transfer is not a function of the scatter angle". This statement is incorrect; even if the scatter angle has been replaced by other parameters, it is still a function of the scatter angle. See Equation (1) in the specification.

Claim 12 recites the limitation "the rotational plane" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "the scatter angle" in line 6. There is insufficient antecedent basis for this limitation in the claim. Furthermore, the scatter angle is not defined.

Claim 17 recites the limitation "the scatter angle" in line 3. There is insufficient antecedent basis for this limitation in the claim. Furthermore, the scatter angle is not defined.

Claim 18 recites the limitation "the detector element" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the foot" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the scatter center" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the scatter material" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "the scatter angle" in line 6. There is insufficient antecedent basis for this limitation in the claim. Furthermore, the scatter angle is not defined.

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claims 1, 6, 7, 9, 11, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harding *et al.* (U. S. Pub. No. 2002/0150202 A1) in view of Schneider *et al.* (Medical Imaging 2001).

With regard to claim 1, Harding *et al.* disclosed a computed tomography method that comprises the steps of: a) generating, using a radiation source (S) and a diaphragm arrangement (31) which is arranged between an examination zone (13) and the radiation source, a fan beam (42) traverses the examination zone and an object present therein; b) generating relative motions, comprising a rotation about an axis (14) of rotation, between the radiation source and the object (paragraph [0022]); and c) acquiring measuring values which are dependent on the intensity of the radiation by means of a detector unit (D) which detects, during the relative motions, the primary radiation from the fan beam and radiation which is coherently scattered in the examination zone or on the object (paragraph [0032]).

However, Harding *et al.* failed to disclose the step of: d) reconstructing a CT image of the examination zone from the measuring values, during which back projection is carried out in a volume which is defined by two linearly independent vectors of the rotational plane and a wave vector transfer.

Schneider *et al.* disclosed a computed tomography method that comprises reconstructing a CT image of an examination zone from the measuring values, during which reconstruction is carried out in a volume which is defined by two linearly independent vectors (x, y) of the rotational plane and a wave vector transfer (q) . Although Schneider *et al.* proceeded with iterative algebraic reconstruction technique (ART), Schneider *et al.* clearly indicated that filtered back projection is a viable alternative to iterative algebraic reconstruction technique (ART) (p. 756, 3.1 The Reconstruction Algorithm - Principles and Degradation Effects, first paragraph).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to reconstruct a CT image of the examination zone from the measuring values, during which back projection is carried out in a volume which is defined by two linearly independent vectors (u, v) of the rotational plane and a wave vector transfer (q) , since a person would be motivated to visually identify anomalous regions that coherently scattered x-rays.

With regard to claim 6, Harding *et al.* disclosed a computed tomography that comprises: a radiation source (S); a diaphragm arrangement (31), which is arranged between an examination zone (13) and the radiation source, to generate a fan beam (42) which traverses the examination zone; a detector unit (D), which is coupled to the radiation source and comprises a measuring surface; a drive arrangement (5) for displacing an object present in the examination zone with respect to the radiation source along an axis of rotation and/or parallel to the axis of rotation; a reconstruction unit (10) for reconstructing the distribution of the scatter intensity with the examination zone from measuring values acquired by the detector unit; and a control unit (7) for controlling the radiation source, the detector unit, the drive arrangement, and the reconstruction unit in conformity with the steps a) to c) of claim 1.

However, Harding *et al.* failed to disclose the a control unit that is configured for: d) reconstructing a CT image of the examination zone from the measuring values, during which back projection is carried out in a volume which is defined by two linearly independent vectors of the rotational plane and a wave vector transfer.

Schneider *et al.* disclosed a computed tomography method that comprises reconstructing a CT image of an examination zone from the measuring values, during which reconstruction is carried out in a volume which is defined by two linearly independent vectors (x, y) of the rotational plane and a wave vector transfer (q). Although Schneider *et al.* proceeded with iterative algebraic reconstruction technique (ART), Schneider *et al.* clearly indicated that filtered back projection is a viable alternative to iterative algebraic reconstruction technique (ART) (p. 756, 3.1 The Reconstruction Algorithm - Principles and Degradation Effects, first paragraph).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to configure the control unit to reconstruct a CT image of the examination zone from the measuring values, during which back projection is carried out in a volume which is defined by two linearly independent vectors (u, v) of the rotational plane and a wave vector transfer (q), since a person would be motivated to visually identify anomalous regions that coherently scattered x-rays.

With regard to claim 7, Harding *et al.* and Schneider *et al.* disclosed the computed tomography method as claimed in claim 1. However, Harding *et al.* and Schneider *et al.* failed to disclose a computer readable medium that contains instructions for controlling a control unit for controlling a radiation source, a diaphragm arrangement, a detector unit, a drive arrangement, and a reconstruction unit of a computer tomograph so as to carry out the method of claim 1.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a computer readable medium that contains instructions for controlling a control unit for controlling a radiation source, a diaphragm arrangement, a detector unit, a drive arrangement, and a reconstruction unit of a computer tomograph so as to carry out the method of claim 1, since a person would be motivated to employ a computer as the control unit to implement the method of claim 1.

With regard to claim 9, Harding *et al.* and Schneider *et al.* disclosed the computed tomography method of claim 1, wherein the wave vector transfer is a function of a first distance between a detector element and a foot of the detector unit, a second distance between a scatter center and the foot of the detector unit, and an inverse wavelength of the coherently scattered radiation (paragraph [0032]). The physics is the same.

With regard to claim 11, Harding *et al.* and Schneider *et al.* disclosed the computed tomography method of claim 1, wherein the wave vector transfer is a function of $A/(2D\lambda)$, where A represents a distance between a detector element and a foot of the detector unit, D represents a distance between a scatter center and the foot of the detector unit, and λ represents the wavelength of the coherently scattered radiation (paragraph [0032]). The physics is the same.

With regard to claim 16, Harding *et al.* disclosed a computed tomography system that comprises: a detector (D) that detects primary and scatter radiation traversing an examination zone (paragraph [0032]).

However, Harding *et al.* failed to disclose a reconstructor that reconstructs measuring values indicative of the detected radiation, wherein the reconstructor back projects the measuring

values in a volume as a function of a wave vector transfer that varies based on a difference between a scatter center and a foot of the detector.

Schneider *et al.* disclosed a reconstructor that reconstructs measuring values indicative of the detected radiation, wherein the reconstructor reconstructs the measuring values in a volume as a function of a wave vector transfer (q) that varies based on a difference between a scatter center and a foot of the detector (Equation 2). Although Schneider *et al.* proceeded with iterative algebraic reconstruction technique (ART), Schneider *et al.* clearly indicated that filtered back projection is a viable alternative to iterative algebraic reconstruction technique (ART) (p. 756, 3.1 The Reconstruction Algorithm - Principles and Degradation Effects, first paragraph).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a reconstructor that reconstructs measuring values indicative of the detected radiation, wherein the reconstructor back projects the measuring values in a volume as a function of a wave vector transfer that varies based on a difference between a scatter center and a foot of the detector, since a person would be motivated to visually identify anomalous regions that coherently scattered x-rays.

With regard to claim 17, Harding *et al.* and Schneider *et al.* disclosed the computed tomography system of claim 16, wherein the wave vector transfer (q) is a function of $(1/\lambda)\sin(\theta/2)$, where λ is the wavelength of the scattered radiation, and θ is the scatter angle (Schneider *et al.*, Equation 2).

With regard to claim 18, Harding *et al.* and Schneider *et al.* disclosed the computed tomography system of claim 17, wherein the scatter angle is a function of $\arctan(A/D)$, where A

is a distance between the detector element and the foot of the detector unit, and D is a distance between the scatter center and the foot of the detector unit (This is just geometry).

With regard to claim 19, Harding *et al.* and Schneider *et al.* disclosed the computed tomography system of claim 16, wherein an intensity of the scattered radiation is dependent exclusively on the scatter material (This is just physics).

25. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harding *et al.* (U. S. Pub. No. 2002/0150202 A1) and Schneider *et al.* (Medical Imaging, 2001) as applied to claim 1 above, and further in view of Proska *et al.* (U. S. Patent No. 6,285,733 B1).

With regard to claim 2, Harding *et al.* and Schneider *et al.* disclosed the computed tomography method as claimed in claim 1.

However, Harding *et al.* and Schneider *et al.* failed to teach that the back projection during the reconstructing step d) is performed along rays having a curved shape.

Proska *et al.* disclosed a computed tomography method that comprises a reconstructing step including performing back projection along rays having a curved shape (column 5, line 55 - column 6, line 10). This reconstructing method features reduced amount of calculation work (column 1, lines 59-63).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform back projection along rays having a curved shaped as disclosed by Proska *et al.*, since a person would be motivated to reduce the calculation time of reconstruction.

With regard to claim 5, Harding *et al.* and Schneider *et al.* disclosed the computed tomography method as claimed in claim 1, wherein the reconstructing step d) comprises the

following step: reconstructing the distribution (CT image) of the scatter intensity from the measuring values, during which back projection is carried out in a volume which is defined by two linearly independent vectors (u , v) of the rotational plane and a wave vector transfer (q).

However, Harding *et al.* and Schneider *et al.* failed to disclose the following reconstructing steps: one-dimensional filtering of the measuring values in the direction parallel to the rotational plane; and rebinning of the measuring values so as to form a number of groups, each measuring values measured by a detector element being associated with a line from the detector element to the radiation source position and each group comprising a plurality of planes which are parallel to one another and to the axis of rotation and in which a respective line fan is situated.

Proska *et al.* disclosed a computed tomography method that comprises the following reconstructing steps: one-dimensional filtering of measuring values in the direction parallel to the rotational plane (column 7, lines 1-14); and rebinning of the measuring values so as to form a number of groups, each measuring values measured by a detector element being associated with a line from the detector element to the radiation source position and each group comprising a plurality of planes which are parallel to one another and to the axis of rotation and in which a respective line fan is situated (column 5, line 20 - column 6, line 67). This reconstructing method features reduced amount of calculation work (column 1, lines 59-63).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform back projection along rays having a curved shaped as disclosed by Proska *et al.*, since a person would be motivated to reduce the calculation time of reconstruction.

26. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harding *et al.* (U. S. Pub. No. 2002/0150202 A1) in view of Schneider *et al.* (Medical Imaging 2001) and Proska *et al.* (U. S. Patent No. 6,285,733 B1).

With regard to claim 12, Harding *et al.* disclosed a computed tomography method that comprises: generating, using a radiation source (S) and a diaphragm arrangement (31) arranged between an examination zone (13) and the radiation source, a fan beam (42) traverses the examination zone; generating a relative motion, comprising a rotation about an axis (14) of rotation, of the radiation source about the examination zone and an object disposed therein (paragraph [0022]); and acquiring measuring values which are dependent on the intensity of the radiation by means of a detector unit (D) which detects, during the relative motion, the primary radiation from the fan beam and radiation which is coherently scattered in the examination zone or on the object (paragraph [0032]).

However, Harding *et al.* failed to disclose reconstructing a CT image of the examination zone from the measuring values, during which a back projection is carried out in a volume which is defined by two linearly independent vectors of the rotational plane and a wave vector transfer, wherein the back projection is performed in the volume along rays having a curved shape.

Schneider *et al.* disclosed a computed tomography method that comprises reconstructing a CT image of an examination zone from the measuring values; during which reconstruction is carried out in a volume which is defined by two linearly independent vectors (x, y) of the rotational plane and a wave vector transfer (q). Although Schneider *et al.* proceeded with iterative algebraic reconstruction technique (ART), Schneider *et al.* clearly indicated that filtered

back projection is a viable alternative to iterative algebraic reconstruction technique (ART) (p. 756, 3.1 The Reconstruction Algorithm - Principles and Degradation Effects, first paragraph).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to reconstruct a CT image of the examination zone from the measuring values, during which back projection is carried out in a volume which is defined by two linearly independent vectors (u , v) of the rotational plane and a wave vector transfer (q), since a person would be motivated to visually identify anomalous regions that coherently scattered x-rays.

Proska *et al.* disclosed a computed tomography method that comprises a reconstructing step including performing back projection along rays having a curved shape (column 5, line 55 - column 6, line 10). This reconstructing method features reduced amount of calculation work (column 1, lines 59-63).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform back projection along rays having a curved shaped as disclosed by Proska *et al.*, since a person would be motivated to reduce the calculation time of reconstruction.

With regard to claim 13, Harding *et al.*, Schneider *et al.*, and Proska *et al.* disclosed the computed tomography method of claim 12, wherein the curved shaped shape is a hyperbola (the shape is the same given the same wave vector transfer).

With regard to claim 14, Harding *et al.*, Schneider *et al.*, and Proska *et al.* disclosed the computed tomography method of claim 13, wherein the hyperbola is a function of a distance between a scatter center and a foot of the detector unit (given the same wave vector transfer).

Allowable Subject Matter

27. Claims 3, 4, 8, 15, and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

28. Applicants' arguments filed 30 July 2007 with respect to claims 2 and 5 have been fully considered and are persuasive. The rejection of claims 2 and 5 under 35 U.S.C. 112, second paragraph, has been withdrawn.

29. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- (1) Harding *et al.* (U. S. Patent No. 6,744,845 B2) disclosed a computed tomography apparatus for determining the pulse momentum transfer spectrum.
- (2) Grass *et al.* (U. S. Patent No. 6,426,989 B2) disclosed a computed tomography method.
- (3) Harding (U. S. Patent No. 6,470,067) disclosed a computed tomography apparatus for determining the pulse momentum transfer spectrum.

- (4) Tuy (U. S. Patent No. 5,625,660) disclosed image reconstruction with weighting function.
- (5) Stevendaal *et al.*, "A new reconstruction algorithm for energy-resolved coherent scatter computed tomography," Proc. of SPIE, Vol. 5747, 2005.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Allen C. Ho/
Primary Examiner
Art Unit 2882

10 November 2007